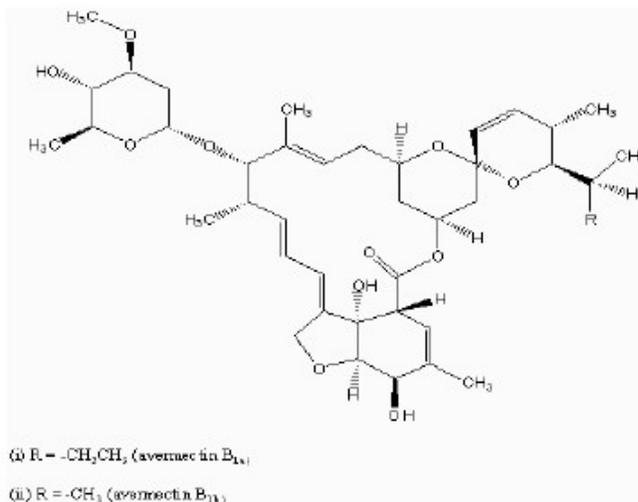


MATERIAL SAFETY DATA SHEET

1. Chemical Product Identification

1.1 Product Details

Product Name: Alonze 50 EC



Molecular Weight: 873.11

Molecular Formula: C₄₈H₇₂O₁₄

Chemical Name:

mixture of $\geq 80\%$ (10E,14E,16E)-(1R,4S,5'S,6S,6'R,8R,12S,13S,20R,21R,24S)-6'-[(S)-sec-butyl]-21,24-dihydroxy-5',11,13,22-tetramethyl-2-oxo-(3,7,19-trioxatetracyclo[15.6.1.14,8.0_{20,24}]pentacos-10,14,16,22-tetraene)-6-spiro-2'-(5',6'-dihydro-2'H-pyran)-12-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- α -L-arabino-hexopyranosyl)-3-O-methyl- α -L-arabino-hexopyranoside and $\leq 20\%$ (10E,14E,16E)-(1R,4S,5'S,6S,6'R,8R,12S,13S,20R,21R,24S)-21,24-dihydroxy-6'-isopropyl-5',11,13,22-tetramethyl-2-oxo-(3,7,19-trioxatetracyclo[15.6.1.14,8.0_{20,24}]pentacos-10,14,16,22-tetraene)-6-spiro-2'-(5',6'-dihydro-2'H-pyran)-12-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- α -L-arabino-hexopyranosyl)-3-O-methyl- α -L-arabino-hexopyranoside
or
bridged fused ring systems nomenclature: mixture of $\geq 80\%$ (2aE,4E,8E)-(5'S,6S,6'R,7S,11R,13S,15S,17aR,20R,20aR,20bS)-6'-[(S)-sec-butyl]-5',6,6',7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-5',6,8,19-tetramethyl-17-oxospiro[11,15-methano-2H,13H,17H-furo[4,3,2-pq][2,6]benzodioxacyclooctadecin-13,2'-[2H]pyran]-7-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- α -L-arabino-hexopyranosyl)-3-O-methyl- α -L-arabino-hexopyranoside and $\leq 20\%$ (2aE,4E,8E)-(5'S,6S,6'R,7S,11R,13S,15S,17aR,20R,20aR,20bS)-5',6,6',7,10,11,14,15,17a,20,20a,20b-dodecahydro-20,20b-dihydroxy-6'-isopropyl-5',6,8,19-tetramethyl-17-oxospiro[11,15-methano-2H,13H,17H-furo[4,3,2-pq][2,6]benzodioxacyclooctadecin-13,2'-[2H]pyran]-7-yl 2,6-dideoxy-4-O-(2,6-dideoxy-3-O-methyl- α -L-arabino-hexopyranosyl)-3-O-methyl- α -L-arabino-hexopyranoside

Color: light yellow liquid

Odor: odorless

CAS No.: 71751-41-2

1.2 Company Identification

Name: SHANDONG UNITED PESTICIDE INDUSTRY CO., LTD

Address: Building 1#, Middle Shengli Road, Daxin Village, Fan Town, Daiyue
Distric City, People's Republic of China

Telephone number: 86-531-86401640

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Abamectin	71751-41-2	5.0 min
others	Not available	95.0 max

3. Hazards Identification

More important danger for the man: none

Dangers for the environment: high toxic to fish and bees

Physical-chemical dangers: none

4. First Aid Measures

Skin: wash thoroughly with soap and water.

Eyes: flush with plenty of water for at least 15 minutes.

Inhalation: move to fresh air.

Ingestion: Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. Repeat until vomit fluid is clear.

5. Fire-Fighting Measures

Extinguishing media

To be used: Water, sand, foam, carbon dioxide, dry powder

Don't use: not applicable

Particular risk: not applicable

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

6. Accidental Release Measures

Personal cautions: Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Cleaning methods

EX: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

7. Handling and Storage

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: Store in a cool, dry place.

8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: goggles

Industrial hygiene: not applicable

9. Physical and Chemical Properties

Appearance: light yellow liquid.

Odor: characteristic odor.

Relative Density: 0.88 g/ml.

pH value: 6.0.

Water Solubility: emulsifiable.

Ignition temperature: not applicable

10. Stability and Reactivity

Conditions to avoid: fire, feed, food and beds of water

Products to avoid: strong oxidizing agents, alkalis and acids.

Thermal decomposition: not applicable

Hazardous decomposition products: not applicable

Hazardous reaction: none

11. Toxicological Information

Acute toxicity: Abamectin is highly toxic to insects and may be highly toxic to mammals as well. Emulsifiable concentrate formulations may cause slight to moderate eye irritation and mild skin irritation. Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma. Abamectin acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing.

Symptoms of nervous system depression such as in coordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure. Abamectin is not readily absorbed through skin. Tests with monkeys show that less than 1% of dermally applied abamectin was absorbed into the bloodstream through the skin. Abamectin does not cause allergic skin reactions. The oral LD₅₀ for abamectin in rats is 10 mg/kg, and in mice ranges from 14 mg/kg to greater than 80 mg/kg. The oral LD₅₀ for the

Product aird EC in rats is 650 mg/kg. The dermal LD₅₀ for technical abamectin in rats and rabbits is greater than 330 mg/kg.

Reproductive effects:

Rats given 0.40 mg/kg/day of abamectin had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data suggest that abamectin may have the potential to cause reproductive

effects at high enough doses.

Teratogenic effects:

Abamectin produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers. There were no birth defects in the offspring of rats given up to 1 mg/kg/day. Abamectin is unlikely to cause teratogenic effects except at doses toxic to the mother.

Mutagenic effects:

Abamectin does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin was shown to be nonmutagenic in the Ames test.

Carcinogenic effects:

Abamectin is not carcinogenic in rats or mice. The rats were fed dietary

doses of up to 2 mg/kg/day for 24 months, and the mice were up to 8 mg/kg/day for 22 months. These represent the maximum tolerated doses.

Organ toxicity:

Animal studies indicate that abamectin may affect the nervous system.

Other data: not applicable

12. Ecological and Ecotoxicological Information

Acute toxicity:

Oral: LD₅₀ (rats): 794 mg/kg.

Dermal: LD₅₀ (rats) > 2150 mg/kg.

Inhalation: LD₅₀ (rats) 4.0 mg/l air - 4 hours.

Irritant properties:

Skin: no irritation

Eye: moderate

Skin sensitization: weak to albino guinea pigs

Effects on birds:

Abamectin is practically nontoxic to birds. The LD₅₀ for abamectin in bobwhite quail is >2000 mg/kg. The dietary LC₅₀ is 3102 ppm in bobwhite quail. There were no adverse effects on reproduction when mallard ducks

were fed dietary doses of 3, 6, or 12 ppm for 18 weeks.

Effects on aquatic organisms:

Abamectin is highly toxic to fish and extremely toxic to aquatic invertebrates. Its LC₅₀ (96-hour) is 0.003 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. Its 48-hour LC₅₀ in *Daphnia magna*, a small

Fresh water crustacean, is 0.003 mg/L. The 96-hour LC₅₀ for abamectin is 0.0016 mg/L in pink shrimp, 430 mg/L in eastern oysters, and 153 mg/L in blue crab. While highly toxic to aquatic organisms, actual concentrations of abamectin in surface waters adjacent to treated areas are expected to be low. Abamectin did not bioaccumulate in bluegill sunfish exposed to 0.099 ug/L for 28 days in a flow-through tank. The levels in fish were from 52 to 69 times the ambient water concentration, indicating that abamectin does not accumulate or persist in fish.

Effects on other organisms:

Abamectin is highly toxic to bees, with a 24-hour contact LC₅₀ of 0.002 µg/bee and an oral LD₅₀ of 0.009 µg/bee.

13. Disposal Considerations

Product: dispose of in compliance with all state and local laws and regulation.

14. Transport Information

Not applicable

15. Regulatory Information

Symbol: not applicable

R phrases: not applicable

S phrases: not applicable

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Company name : SHANDONG UNITED PESTICIDE INDUSTRY CO. LTD.

Signature: 



Date: August 21, 2012
